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Impact of Information Processing Style on Advertising Effectiveness

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Abstract

High advertising effectiveness has become pertinent today with escalating media costs and greater competition among marketers. This paper tests whether an advertisement can be more persuasive if its appeal aligns with the type of advertisement processing by the target audience. Specifically, it was assessed whether individuals vary in their tendency to use the two processing styles e.g. cognition and affect, to process advertisement information. Moreover, it was assessed whether the affective and cognitive processing styles are independent and yet can operate interactively. These were tested across high and low involvement products to ensure greater generalizability of the results. This research found that cognitive and affective processing may take place independently as well as interactively, though in varying extents and sequences, and advertising effectiveness is higher if its appeal matches with the processing styles of the target audience. Additionally, differences in consumers' response to ad appeals across FMCG and durables have been established.

Keywords: Cognition, Affection, Information Processing, Advertisement Appeal, Advertising Effectiveness, Advertising Strategy

Introduction and Justification of This Research

Advertising has been used as an important medium of marketing communication for many decades. Marketers use a variety of advertising appeals to influence targeted customers to prefer their brands. However, as the number of competitors (brands) has increased manifold, advertising rates have spiked sharply in recent years. So, greater advertisement (henceforth stated as 'ad') effectiveness has become pertinent today. In this regard, Fabrigar and Petty (1999) and Zhang and Buda (1999) have stated that two individual characteristics - affect (feelings and emotions associated with the brand) and cognition (logical evaluation of functional attributes), may influence advertising effectiveness, as these characteristics influence an individual's attitude towards a brand (Zanna and Rempel, 1988; Leclerc et al., 1994; Edell and Burke, 1987). It is, therefore, recommended to match the advertising appeal to the attitude basis, i.e. use rational and informational ad for "thinking" persons and "functional" products, and emotional appeals for "feeling" persons and "transformational" products (Dube et al., 1996). In fact, La Barbera, Weingard & Yorkston (1998) found that advertising appeals are likely to be more persuasive when the nature of the appeal matches with these two processing styles of the audience. This explains why some individuals differ in their responses to ad stimuli. Some individuals may be stimulated to engage in and enjoy thinking when exposed to an ad (Cacioppo and Petty, 1982). On the other hand, some individuals, when exposed to an emotionally charged advertising appeal, may tend to get emotional with greater intensity (Aaker et al., 1986).

The type of information processing that focuses on the cognitive style has usually been referred to as 'Need for Cognition' (NFC) (Cacioppo and Petty, 1982). Mantel and Kardes (1999) found that high NFC (HNFC) individuals process ad information more thoroughly

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than those with low NFC (LNFC). HNFC individuals respond more positively to factual ad appeals and those with strong arguments (Geuens and De Pelsmacker, 1999). The type of information processing that focuses on the feeling and liking of the product or ad is referred to as 'Preference for Affect' (PFA) (Sojka and Giese, 1997). Larsen and Diener (1987) found that when people are exposed to equal levels of affect producing stimuli, some individuals consistently respond with high levels of emotional intensity while others respond with only moderate levels. High PFA (HPFA) individuals respond more positively to emotional advertisement appeals (Sojka and Giese, 1997). Interestingly, studies by Burke and Edell (1989); Zajonc and Markus (1982) and others have demonstrated that the cognitive and affective processing may take place independently as well as together. In case of those who tend to use both processing styles (referred to as combination processors), it may be expected that ads containing both emotional and informational elements should produce higher advertising effectiveness than ads containing only one of these elements. In case of individuals having low interest in processing affective and cognitive information, their behavior cannot be predicted. They are referred to as passive processors. In this research, extending the above-mentioned findings, it was investigated whether matching the ad appeals with processing styles result in greater advertising effectiveness i.e. whether individuals vary in their tendency to use cognition and affect to process ad information. Moreover, it was tested whether the affective and cognitive processing styles are independent and yet can operate interactively (Sojka and Geise, 1997). Advertising effectiveness was tested via attitude towards ad (Aa) (as suggested by Mitchell and Olson, 1981), attitude towards brand (Ab) (as suggested by Punj and Coutler, 1999), and purchase intention (PI) (as suggested by Yi, 1990). Final choice of brand was also checked in experimental condition wherein the respondents were asked to purchase a brand of their choice. Following suggestion of Ruiz and Sicilia (2004), in this paper, the findings were cross-validated across low and high involvement product categories. Also, to the best of our knowledge, no such study has been done in the context of Indian consumers. Hence, this research attempts to empirically investigate whether advertising effectiveness was greater when appeal matched with the NFC and PFA information processing styles of the audience, operating either independently or interactively, in case of FMCG and consumer durable.

Review of Literature and Development of Hypotheses

Aa is a strong mediator of advertising effectiveness (Homer, 1990). The Aa and Ab may be influenced by the type of processing of the respective information (Gardner, 1985). Consumers' attitude stems from their cognitive evaluation, emotional feelings and intentional responses toward a given object or general feeling in an ad (Lin, 2011). According to Engel and Blackwell (1982), cognitive processing involves "interpreting present perceptions in light of past information to reason our way through unfamiliar problems" (p. 237). They distinguish cognition from affect in terms of the emphasis on reason or logic (feelings or emotions are not included in cognitive processing). They related thinking to cognitive processing and feeling to affective processing. Mohanty and Parida, (2014) stated that among emotional appeals, affection, fear, fun, love, pride and thrill were found to attract the consumers' attention towards the brand. Raman, Chattopadhyay and Hoyer (1995) further distinguish emotions from moods. They conceptualise emotions as longer affective states than moods which are more general and less intensive. Zanna and Rempel (1988) have suggested that an attitude be viewed as an overall categorization of a stimulus object along an evaluative dimension. The process of evaluation is viewed as being based upon three general sources of information: (i) cognitive information (e.g., beliefs about the attitude object), (ii) affective information (e.g., feelings about the attitude object), and (iii) information concerning past behaviors or behavioral intentions. In addition, they have stated that an individual may have more than one attitude toward a stimulus object.

According to Kari (1990), affect and cognition are not dichotomous. It is unlikely that attitudes are either pure affect-based or pure cognition-based. Mostly, affect and cognition jointly form attitude, albeit in varying degrees and sequences. Extending this concept, Sojka and Giese (1997) suggest that the relationship between affect and cognition can be conceptualized into four types of interactions: (a) Thinking Processors: They

are individuals who prefer to think rationally and rely primarily on cognitive information. Such individuals are characterized as HNFC and LPFA. Inman, McAlister and Hoyer (1990) stated that HNFC individuals make more carefully thought-out and specific detail – oriented judgments. Persons scoring high on the NFC Scale intrinsically enjoy thinking, whereas persons scoring low on the scale tend to avoid effortful cognitive work (Cacioppo and Petty, 1982). (b) Feeling Processors: They are individuals who prefer to think emotionally and focus primarily on emotional aspects of a product. Such individuals are characterized as HPFA and LNFC. Feeling processors have been found to give weightage to peripheral cues of an ad e.g. endorser attractiveness (Haugtvedt, Petty and Cacioppo, 1992), spokesperson credibility (Petty and Cacioppo, 1986), humour (Zhang, 1996), or the number of arguments presented (Cacioppo, Petty and Morris, 1983). Combination Processors: They are individuals who are high on both affect and cognition (HNFC and HPFA) and are comfortable using either processing style (Burke and Edell, 1989). BoothButterfield and BoothButterfield (1990) found that HNFC individuals were likely to process feelings too, and stated that an affective orientation is not the polar opposite of need for cognition. In addition, Raman, Chattopadhyay and Hoyer (1995) found a moderate correlation between the NFC and PFA scales indicating that the affective processing and cognitive processing were interacting. In this case, product attributes may act as cues to form general attitudes. However, at the time of preference judgment, general attitudes and impressions are used instead of specific attribute based comparisons (Sojka and Giese, 1997). Passive Processors: They are individuals who are low on both affect and cognition (LNFC and LPFA). As this type of processing is not clearly understood and is not relevant in this research, this segment is not included in this study.

The style of processing information can be influenced by situational variables such as involvement towards product (Petty and Cacioppo, 1986). Hence, additional research has been suggested to test measures of Aa, Ab across diverse involvement categories e.g. fast moving consumer good (FMCG) and durable, which are generically low involvement and high involvement category respectively (Sojka and Giese, 1997). According to Elaboration Likelihood Model, when consumers are involved in the product, then the ad is processed through the central route (thorough evaluation based on logical information) (Petty et al., 1983). This is because high-involvement purchase decisions often involve high levels of perceived risk, sending consumers into a state of increased information search (Mishra, 2009). However, in case of low involvement, the advertisement processed through the peripheral route (evaluation based on good feelings, attractiveness, image about product/ company/endorser etc,) (Chaoying et al., 2011). In compliance with the above suggestions, this research tests advertising effectiveness across soft drink (FMCG) and mobile handset (durable). Soft drink is a low-priced, low-involvement consumable product, and mobile handset is a high-priced, high-involvement durable product (Prendergast et al., 2008).

In this study, brands that are typically unknown in India were used to alleviate any potential bias of brand equity mediating the Ab and brand choice (as suggested by Lafferty and Goldsmith, 1999). Three ad copies were created for each category that differed in their levels of information and emotions elicited (refer to annexure). The artwork was done by a professional designer and the content approved by the authors. The ads - Bubblez (soft drink) and Davicom (mobile handset) were very informational (strong and objective arguments). The ads - Citrus (soft drink) and Morph (mobile handset) were very emotional without any technical or objective information. The third type of ads - Rockstar (soft drink) and Orange (mobile handset) were both very informational and emotional at the same time.

While preliminary evidences in extant literature suggest an interaction between affective and cognitive processing styles in which both processes may operate simultaneously yet separately, additional research is needed to offer conclusive empirical evidence supporting this conceptualization (Sojka and Giese, 1997). Also, the conceptualization needs to be tested across diverse involvement categories for greater generalizability (Sojka and Giese, 1997). Moreover, as culture has a powerful influence on consumer behaviour (Mesdag, 2000), testing the concept in the context of Indian consumers shall enable its greater generalizability across cultural environment (Grande, 2005).

Research objective: To address the above stated research problems, the objective of this research is: "To evaluate whether the effectiveness of an ad is higher on an individual if it's appeal aligns with the information processing style of that individual, operating either independently or interactively, across FMCG and durable."

In this research, two principal assessments were done. Firstly, it was checked whether the two information processing styles operate independently. For this, effectiveness of informational ad was compared between HNFC and LNFC individuals and effectiveness of emotional ad was compared between HPFA and LPFA individuals. Some studies have revealed that rational appeal has a more significant effect on advertising attitudes (Lin, 2011), while some other explained that emotional appeal creates more underlying effects on advertising attitudes based on product type (Solomon, 1992). Based on the review of extant literature, particularly findings by Dube, Chattopadhyay and Letarte (1996), Zanna & Rempel (1988), Leclerc, Shmitt and Dube (1994), Edell and Burke (1987), La Barbera, Weingard and Yorkston (1998) and others, it can be generally expected that there will be significant difference in advertising effectiveness between individuals with cognitive and affective styles of information processing, and advertising effectiveness will be more if its appeal aligns with the type of information processing. Akbari (2015) found significant differences in responses to various rational and emotional appeals. Also, advertising appeal affects the level of trust and the kind of relationship that the consumer has with the product, by positioning the product in the mind of the consumers (Mishra, 2009). Akbari (2015) stated that emotional appeals have a more significant positive effect on advertising attitudes than rational appeal in case of low involvement products. On the contrary, rational appeals have a significantly positive effect on advertising attitude in case of high involvement products. We therefore, stated the following hypotheses:

H1a: Informational ad for soft drink is significantly more effective on HNFC individuals as compared to LNFC individuals.

H1b: Informational ad for mobile handset is significantly more effective on HNFC individuals as compared to LNFC individuals.

H2a: Emotional ad for soft drink is significantly more effective on HPFA individuals as compared to LPFA individuals.

H2b: Emotional ad for mobile handset is significantly more effective on HPFA individuals as compared to LPFA individuals.

Secondly, it was checked whether the information processing styles operate interactively. For this, effectiveness of each ad type on the three types of information processors were checked across FMCG and durable. Based on the review of extant literature, particularly findings by Sojka and Giese (1997), Kari (1990), Zajonc and Markus (1982), Burke and Edell (1989) and others, it was generally expected that there would be significant difference in advertising effectiveness among the three types of interactions of affect and cognition (information processors), and advertising effectiveness would be more if its appeal aligned with the type of information processor. We therefore, stated the following hypotheses:

H3a: Informational ad for soft drink is significantly more effective on Thinking Processors than emotional ad and informational cum emotional ad.

H3b: Informational ad for mobile handset is significantly more effective on Thinking Processors than emotional ad and informational cum emotional ad.

H4a: Emotional ad for soft drink is significantly more effective on Feeling Processors than informational ad and informational cum emotional ad.

H4b: Emotional ad for mobile handset is significantly more effective on Feeling Processors than informational ad and informational cum emotional ad.

H5a: Informational cum emotional ad for soft drink is significantly more effective on Combination Processors than informational ad and emotional ad.

H5b: Informational cum emotional ad for mobile handset is significantly more effective on Combination Processors than informational ad and emotional ad.

Methodology

In this study, a survey design and a cross-sectional descriptive research approach was used. This is

because the NFC and PFA variables investigated in this study cannot be manipulated as they are intrinsic characteristics, and such variables are best studied through descriptive research (Shuttleworth, 2008). Survey method facilitated collection of significant amounts of quantitative data to measure consumers' information processing styles and approximates the test of causality (Burns & Bush, 2007). Personal interview method of survey was adopted. In this study, the sampling frame is defined as all those individuals who are targeted consumers of various brands, exposed to audio-visual ads and make purchase decisions. It was initially screened whether the targeted respondents complied with the sampling frame criteria. A combination of convenience sampling and judgment sampling methods have been adopted in this study as they enabled us to conform to the sampling frame criteria defined in this research (Cooper & Schindler, 2006).

Measures used in this study: An investigation of the extant literature to the best of our ability revealed no single scale that can directly measure the individual differences in tendency to use affective and cognitive processing of information. Hence, in this study two separate scales were used to measure the extent of an individual's NFC and PFA. To measure NFC, the scale developed by Cacioppo, Petty and Kao (1984) was used in this study. It is an 18-item scale which measures the extent to which individuals use cognitive information when making decisions. This scale can measure cognitive processing across all situations. To measure PFA, the scale developed by Sojka and Giese (1997) was used. It is a 13-item, situation-invariant affective scale and therefore can measure the intrinsic tendency of information processing. The items were measured using 7-point Likert scale in terms of their agreement to given statements. The scales of NFC and PFA used in this study were deemed to be appropriate instruments in measuring the individual differences as they measure the intensity of cognitive and affective processing styles (Sojka and Giese, 1997). For attitude measures, three semantic differential scales were used: Pleasant/Unpleasant for Aa, Very Desirable/Very Undesirable for Ab, and Very Likely/Very Unlikely for PI (MacKenzie and Lutz, 1989).

Responses were collected from 240 sampling units. Only those who rated more than 4.5 in the seven-point scale were deemed as HNFC/HPFA and those below 3.5 were deemed as LNFC/LPFA. 38 respondents who gave neutral responses (3.5 – 4.5) were not included in the analysis. The final sample size was 202.

The multi-item constructs for assessing information processing styles were pre-tested for Content validity, Construct validity (e.g. Discriminant validity and Convergent validity) and Reliability (Cooper and Schindler, 2006) to avoid measurement errors. In order to strengthen the content validity of the measures, comprehensibility of the measures was tested amongst 10 potential respondents (Shuttleworth, 2008). Additionally, use of Likert scales which enabled collection of more detailed and precise information (Neuman, 1997), use of multiple items to measure a wider range of the meaning of a construct (Neuman, 1997) and the adaptation of the measures from extant literature, strengthened the content validity. In this study, discriminant and convergent validity of the measures were assessed through exploratory factor analyses and confirmatory factor analyses respectively amongst 76 respondents. This sample size is based on the recommendation of including at least five samples per item (Hair, Anderson, Tatham and Black, 2006). Discriminant validity was assessed through principal component analysis (PCA), to check whether the number of factors extracted matches with the number of factors specified in literature (Hair et al., 2006). Only factors having eigen values greater than one were deemed significant (Hair et al., 2006). Convergent validity was assessed through factor loading in principal component analysis through confirmatory approach, item-to-total correlations and alpha if item deleted (Field, 2000). Confirmatory Factor Analysis (CFA) was performed to check whether the number of factors and the loadings of the items on them conform to what is expected on the basis of pre-established theory (Field, 2000). If items have high loadings on the predicted factors, convergent validity is established (Garson, 2007). Based on the recommendations of Stevens (2002), factor loadings value of 0.3 and above is considered appropriate in this study. As a rule of thumb, item-total correlation values higher than 0.5 are considered appropriate (Hair et al., 2006) for establishing internal consistency. Prior to conducting factor analysis, the data was checked for measures of sampling adequacy and appropriateness for factor analysis using two correlation tests e.g. Bartlett's test of

sphericity and Kaiser-Meyer-Olkin (KMO) test (Field, 2000). Correlation matrix determinant was checked for any multicollinearity in the data for each scale (Field, 2000). A correlation matrix determinant less than 1.0E-05 is deemed to imply non-multicollinearity (Field, 2000). Cronbach's alpha statistic was used to measure reliability of the scales. Additionally, alpha value on deletion of an item, and item-to-total correlations were used to assess internal consistency (Field, 2000). Following Kline (1993), scales recording Cronbach's alpha values higher than 0.5 are deemed to have satisfactory reliability and those with values higher than 0.6-0.7 are deemed to have good reliability (Hair et al., 2006).

Paired sample t – test was carried out to assess the sample mean differences between HNFC and LNFC individuals in terms of effectiveness of a type of ad. The two-sample t-test is often the most appropriate statistical test to use when we wish to compare a continuous outcome variable in two independent groups, and when the independent variables are either nominal or ordinal (Field, 2000). The types of ads were coded as nominal dummy variables. Equal variance was assumed as Levene's statistic was found to be significant at >.05 (Field, 2000). For post hoc comparison, Scheffe was used as it is the most conservative (Field, 2000).

One-way ANOVA was carried out to assess whether there is any influence of the three types of ads on individual's Aa, Ab and PI pertaining to each processing style. One-way ANOVA is most appropriate in case of categorical independent variable with more than two independent groups and continuous dependent variable (Field, 2000).

Findings and Conclusions

Demographic profile of the respondents: Majority of the respondents are male (62 per cent) as compared to 38 per cent females. 96 per cent of the sample is in the age-group of 24-30 years, and the rest above 30 years of age. All are graduates or post-graduates. Since youths are primarily targeted for soft drinks and mobile handsets, they are the ones who pay maximum attention to the ads (Verma, 2009). Keeping in view the large number of respondents in the age group of 23-27 years, it may be argued that use of students should be scrutinized, as their responses are slightly more homogenous than those of non-student samples (Peterson, 2001). However, there are advantages of using young respondents (students), which include low-cost, availability, cooperation, and ease of following instructions (Hampton, 1979), which support their use as surrogates for other populations (Khera and Benson, 1970; Yavas, 1994). Calder, Phillips and Tybout (1981) argue that student samples are appropriate particularly when testing theory.

Assessment of reliability and validity of the measures: Tests of the measures of sampling adequacy (MSA) depict that in Bartlett's test of sphericity, the Chi-square values of NFC (105.52) and PFA (166.89) scales are large and the Bartlett's test is significant ($p<0.001$). This depicts that the R-matrix is not an identity matrix (Field, 2000) in both cases. The Kaiser-Meyer-Olkin (KMO) statistics of NFC (.81) and PFA (.77) scales are greater than 0.5, which indicates that patterns of correlations are relatively compact and factor analysis is expected to yield reliable results (Field, 2000). The correlation matrix determinant values (NFC = .23 and PFA = .10) however, show that there is some multicollinearity.

Table 1: Rotated Component Matrix

Items		*Component*	
		1	2
NFC	Q1	-.107	**-.573**
	Q2	.071	**-.588**
	Q3	.077	**.578**
	Q4	-.037	**.735**
	Q5	-.019	**.755**
	Q6	.066	**.690**
	Q7	-.156	**.590**
PFA	Q1	**.633**	.105
	Q2	**.714**	-.061
	Q3	**.818**	-.033
	Q4	**.780**	-.062
	Q5	**.688**	.051
	Q6	**.478**	.081
	Q7	**.676**	-.158

N = 76; Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization.

(Source: Developed for this research)

The initial rotated component matrix of the NFC and PFA scales depicted significant cross-loadings of multiple items. Such items were subsequently deleted. The items of the modified scale depicted high loading on their respective factor in case of both NFC and PFA measures and no cross-loadings above .3 (refer Table 1). This established the discriminant validity of the two scales after modification. The component structure was appropriate and there was no conceptual overlap between the two scales. Subsequently, the scales were checked for convergent validity.

It is evident from Table 2 that while the factor loadings of the items on their specified factors are higher than 0.3, the item-to-total correlations of NFC scale are weak. Two items of NFC scale depict higher values than the Cronbach's alpha value, on its deletion. These establish only moderate convergent validity of the NFC scale. The convergent validity of PFA scale is satisfactory. The reliability of PFA scale is high, while that of NFC scale is moderate. However, keeping in view the discriminant validity results and factor loading values of NFC scale, the construct validity was deemed satisfactory and the seven items as mentioned above were retained and the final survey was carried out with the modified NFC and PFA scales.

Table 2: Summary of Factor Loadings, Alpha if Item Deleted and Item-to-total Correlation Analysis for NFC and PFA Measures

Items	Factor loadings		α if item deleted		Item-to-total correlations		Cronbach's α	
	NFC scale	*PFA scale*	*NFC scale*	*PFA scale*	*NFC scale*	*PFA scale*	*NFC scale*	*PFA scale*
Q1	-.557	.627	.556	.797	-.323	.494		
Q2	-.587	.716	.578	.779	-.366	.587		
Q3	.599	.807	.272	.761	.319	.679		
Q4	.742	.788	.161	.767	.446	.648	.401	.811
Q5	.747	.688	.136	.785	.522	.552		
Q6	.680	.481	.217	.818	.396	.363		
Q7	.610	.686	.285	.788	.316	.534		

N = 76

(Source: Developed for this research)

Comparative assessment of the effectiveness of informational and emotional ads on the two types of information processors: Pertaining to hypothesis 1a and 1b, it is found from Table 3 that informational ads are more effective in case of HNFC individuals, compared with LNFC individuals in case of informational ad. HNFC individuals are found to depict significantly stronger Aa, Ab and PI in case of informational ad, compared with LNFC individuals, across both FMCG and consumer durable. Hypotheses 1a and 1b are therefore supported. This finding is congruent with the finding of Geuens and De Pelsmacker (1999). However, the hypothesis that there would be no significant difference in advertising effectiveness between these two segments in case of emotional ad was not supported. LNFC individuals were found to depict significantly stronger Aa, Ab and PI in case of emotional ad. This may be because those identified as LNFC individuals, are high in PFA.

Table 3: Advertising Effectiveness Measures (Mean Differences Between HNFC and LNFC Individuals)

	Aa		*Ab*		*PI*	
	FMCG	*Durable*	*FMCG*	*Durable*	*FMCG*	*Durable*
HNFC – LNFC**	1.66*	2.45*	1.88*	2.28*	2.21*	2.56*
t	11.03	13.38	10.50	11.32	12.47	12.90
HNFC – LNFC***	-1.30*	-1.30*	-1.45*	-1.37*	-1.44*	-1.36*
t	-6.18	-6.33	-7.46	-5.99	-7.36	-5.60

N (HNFC) = 83, N (LNFC) = 75; **p (2-tailed) < .001*

** In case of Informational advertisement (FMCG: Bubblez; Durable: Davicom)

*** In case of Emotional advertisement (FMCG: Citrus; Durable: Morph)

(Source: Developed for this research)

Table 4: Advertising Effectiveness Measures (Mean Differences between HPFA and LPFA Individuals)

	Aa		*Ab*		*PI*	
	FMCG	*Durable*	*FMCG*	*Durable*	*FMCG*	*Durable*
HPFA – LPFA**	-1.37*	.70	-1.41*	-.12	-1.41*	.41
t	-4.25	1.23	-4.53	-.21	-4.16	.75
HPFA – LPFA***	1.95*	.54	1.95*	.79	2.12*	.66
t	5.31	1.07	4.87	1.69	5.36	1.24

N (HPFA) = 157, N (LPFA) = 24; **p (2-tailed) < .001*

** In case of Informational advertisement (FMCG: Bubblez; Durable: Davicom)

*** In case of Emotional advertisement (FMCG: Citrus; Durable: Morph)

(Source: Developed for this research)

Pertaining to hypotheses 2a and 2b, it is found from Table 4 that emotional ads are more effective in case of HPFA individuals, compared with LPFA individuals. HPFA individuals are found to depict significantly stronger Aa, Ab and PI in case of emotional ad, compared with LPFA individuals. Hypothesis 2a is thus supported. This finding is congruent with the finding of Sojka and Giese (1997). It is also similar to the finding of Moore, Harris and Chen (1995) that high affect intensity individuals may be more likely to be persuaded by emotionally charged advertising appeals. While this was found in case of FMCG, no significant differences were found in case of consumer durable. Hypothesis 2b is thus not supported. This may be because consumers typically use logical evaluation in case of durables, which are high involvement products, and emphasize particularly on the functional benefits of such products, rather than emotional benefits. However, the hypothesis that there would be no significant difference in advertising effectiveness between these two segments in case of informational ad was not supported. LPFA individuals were found to depict significantly stronger Aa, Ab and PI in case of informational ad. This may be because those identified as low PFA individuals, are high in NFC.

Interestingly, it emerges is that there are no discrete segments who are only low in NFC or PFA. Rather one who is low in NFC is apparently high in PFA and vice-versa.

Regarding the final choice for purchase of FMCG brands (in experimental condition), it was noted that majority (51 per cent) of HNFC individuals chose to purchase Bubblez, which was positioned through informational ad appeal. 37 per cent chose Rockstar, which was positioned through combination of informational and emotional ad appeal. As regards durable brands, it was noted that majority (72 per cent) of HPFA individuals chose to purchase Davicom, which was positioned through informational ad appeal. 27 per cent chose Orange, which was positioned through combination of informational and emotional ad appeal. In case of HPFA individuals, 50 per cent respondents chose

Citrus (FMCG), which was positioned through emotional ad appeal. 43 per cent chose Rockstar (FMCG), which was positioned through combination of informational and emotional ad appeal. As regards durable, 47 per cent of HPFA individuals chose Morph, which was positioned through emotional ad appeal and equal number chose Orange for final purchase, which was positioned through combination of informational and emotional ad appeal. These experimental observations corroborate with the findings of this study.

It may be noted that the number of respondents who reported to be HPFA (157) is considerably higher than those reported to be HNFC. This corroborates with earlier study which suggests that affective decisions may be more prominent in early years (Larsen and Diener, 1987).

Comparative assessment of effectiveness of each ad type on the three types of information processors across FMCG and durable: Results pertaining to hypotheses 3 - 5 are explained below. Pertaining to hypothesis 4a and 4b, Table 5 shows that in case of feeling processors, pertaining to FMCG, emotional ad is found to be most effective followed by informational cum emotional ad, over informational ad, in terms of Aa, Ab, and PI. Hypothesis 4a is thus supported. However, in case of durable, informational cum emotional ad is found to be most effective followed by emotional ad, over informational ad, in terms of Aa, Ab, and PI. Hypothesis 4b is thus not supported. This may be because, while HPFA consumers typically emphasize on the emotional benefits of products, however in case of durable, which is high involvement product, they also use logical evaluation and give importance to the functional benefits too. No significant difference in effectiveness has been found associated with emotional ad and informational cum emotional ad, in case of both FMCG and durable.

Regarding the final choice for purchase of FMCG brands, it was noted that 42 per cent of feeling processors chose to purchase Citrus, which was positioned through emotional ad appeal. 38 per cent chose Rockstar, which was positioned through combination of informational and emotional ad appeal. Thus 80 per cent feeling processors chose brands that used emotional elements in their ads. As regards durable brands, 40 per cent of feeling processors chose to purchase Morph, which was positioned through emotional ad appeal. 38 per cent chose Orange, which was positioned through combination of informational and emotional ad appeal. Thus 78 per cent feeling processors chose brands that used emotional elements in their ads. The findings from experimental condition align with the hypotheses test results.

Table 5: Category-Specific Comparison of Advertising Effectiveness Amongst Feeling Processors Across the Three Types of Advertisements

Type of ad (I)	*Type of ad (J)*	*Mean Difference (I-J)*	
		FMCG	*Durable*
In case of 'attitude towards ad'			
Informational ad	Informational cum Emotional ad	-2.18*	-2.65*
	Emotional ad	-2.28*	-2.35*
Informational cum Emotional ad	Emotional ad	-.10	.30
In case of 'attitude towards brand'			
Informational ad	Informational cum Emotional ad	-1.98*	-2.46*
	Emotional ad	-2.25*	-2.11*
Informational cum Emotional ad	Emotional ad	-.26	.35
In case of 'purchase intention'			
Informational ad	Informational cum Emotional ad	-1.81*	-2.55*
	Emotional ad	-2.16*	-2.45*
Informational cum Emotional ad	Emotional ad	-.35	.10

N = 60; **p (2-tailed) < .001;* Post Hoc comparison: Scheffe; ad implies advertisement

In case of FMCG, Informational advertisement: Bubblez; Informational cum Emotional advertisement: Rockstar; Emotional advertisement: Citrus

In case of Durable, Informational advertisement: Davicom; Informational cum Emotional advertisement: Orange; Emotional advertisement: Morph

(Source: Developed for this research)

Table 6: Category-Specific Comparison of Advertising Effectiveness Amongst Thinking Processors Across the Three Types of Advertisements

Type of ad (I)	*Type of ad (J)*	*Mean Difference (I-J)*	
		FMCG	*Durable*
In case of 'attitude towards ad'			
Informational ad	Informational cum Emotional ad	1.28*	.23
	Emotional ad	2.52*	2.52*
Informational cum Emotional ad	Emotional ad	1.23*	2.28*
In case of 'attitude towards brand'			
Informational ad	Informational cum Emotional ad	.76	.66
	Emotional ad	2.61*	2.09*
Informational cum Emotional ad	Emotional ad	1.85*	1.42*
In case of 'purchase intention'			
Informational ad	Informational cum Emotional ad	1.23*	.47
	Emotional ad	2.71*	2.42*
Informational cum Emotional ad	Emotional ad	1.47*	1.95*

N = 21; **p (2-tailed) < .005;* Post Hoc comparison: Scheffe; ad implies advertisement

In case of FMCG, Informational ad: Bubblez; Informational cum Emotional ad: Rockstar; Emotional ad: Citrus

In case of Durable, Informational ad: Davicom; Informational cum Emotional ad: Orange; Emotional ad: Morph

(Source: Developed for this research)

Pertaining to hypothesis 3a and 3b, Table 6 depicts that in case of thinking processors, pertaining to both FMCG and durable, informational ad is found to be most effective followed by informational cum emotional ad, over emotional ad, in terms of Aa, Ab, and PI. Hypothesis 3a and 3b are thus supported. However, no significant difference in attitude towards brand has been found associated with informational and informational cum emotional ads. No significant difference in effectiveness has been found associated with informational ad and informational cum emotional ad ad in case of durable. This is contrary to the expectations that thinking processors typically do not use emotional processing of information, particularly in case of durable. This may be because the informational ad (Davicom) and the informational cum emotional advertisement (Orange) used in this study for durable, were perceived to be equally rich in functional information and equally attractive in creative design, thus resulting in similar attitude towards both the ads.

Regarding the final choice for purchase of FMCG brands, it was noted that majority (62 per cent) of thinking processors chose to purchase Bubblez, which was positioned through informational ad appeal. 38 per cent chose Rockstar, which was positioned through combination of informational and emotional ad appeal. Thus 100 per cent of thinking processors chose brands that used informational elements in their ads. As regards durable brands, it was noted that majority (57 per cent) of thinking processors chose to purchase Davicom, which was positioned through informational ad appeal. 38 per cent chose Orange, which was positioned through combination of informational and emotional ad appeal. Thus 95 per cent of thinking processors chose brands that used informational elements in their ads. The findings from experimental condition align with the hypotheses test results.

Table 7: Category-Specific Comparison of Advertising Effectiveness Amongst Combination Processors Across the Three Types of Advertisements

Type of ad (I)	*Type of ad (J)*	*Mean Difference (I-J)*	
		FMCG	*Durable*
In case of 'attitude towards ad'			
Informational ad	Informational cum Emotional ad	-.76*	-1.10*
	Emotional ad	-.46	.66
Informational cum Emotional ad	Emotional ad	.30	1.76*
Type of ad (I)	*Type of ad (J)*	*Mean Difference (I-J)*	
		FMCG	*Durable*
In case of 'attitude towards brand'			
Informational ad	Informational cum Emotional ad	-.48	-.96*
	Emotional ad	-.21	.66

Informational cum Emotional ad	Emotional ad	.26	1.63*
In case of 'purchase intention'			
Informational ad	Informational cum Emotional ad	-.43	-.68
	Emotional ad	-.06	1.21*
Informational cum Emotional ad	Emotional ad	.36	1.90*

N = 60; **p (2-tailed) < .01;* Post Hoc comparison: Scheffe; ad implies advertisement

In case of FMCG, Informational ad: Bubblez; Informational cum Emotional ad: Rockstar; Emotional ad: Citrus

In case of Durable, Informational ad: Davicom; Informational cum Emotional ad: Orange; Emotional ad: Morph

(Source: Developed for this research)

Pertaining to hypothesis 5a and 5b, Table 7 depicts that in case of combination processors, pertaining to FMCG, no significant differences in effectiveness are found amongst the three types of ads, except that higher level of attitude towards ad has been found associated with informational cum emotional ad over informational ad. Hypothesis 5a is thus not generally supported except in case of Aa. This depicts that either informational ad or emotional ad or combination of both can be effective for combination processors. This finding is congruent with the findings of Burke and Edell (1989) and Zajonc and Markus (1982). This is because such individuals use both types of information processing. In case of durable, no significant differences in Aa and Ab were found between informational ad and emotional ad. However, emotional ad was significantly less effective than the informational ad and informational cum emotional ad on purchase intention of the respective brand Morph. This may be because the benefits of Morph were less relevant to the respondents than that of Davicom and Orange. Interestingly, information cum emotional ad has been found to be significantly more effective than either only informational or only emotional ads. Hypothesis 5b is thus supported. This finding is supported by the findings of BoothButterfield and BoothButterfield (1990) and Raman, Chattopadhyay and Hoyer (1995). This can be explained by the fact that such ads include combination of functional and emotional benefits, which are more appealing to the combination processors.

Regarding the final choice for purchase of FMCG brands, it was noted that majority (73 per cent) of combination processors chose to purchase Rockstar, which was positioned through combination of informational and emotional ad appeal. As regards durable brands, 75 per cent of combination processors chose to purchase Morph, which was positioned through emotional ad appeal. 38 per cent chose Orange, which was positioned through combination of informational and emotional ad appeal.

These experimental observations corroborate with the findings of this study. The above findings reiterate the observations by Kari (1990) that affect and cognition jointly determine attitude formation, though in varying extents and sequences. The findings in this research support the findings by Burke and Edell (1989), Zajonc and Markus (1982) and others that the cognitive and affective processing may take place independently as well as interactively.

Practical Implications

The findings of this research confirm that marketers can achieve greater advertising effectiveness if they match their ad appeal with the information processing styles of the targeted audience. Through such strategy, the marketers can positively influence the attitude of consumers towards the ad, the brand, and therefore their intention to purchase the brand. Consumers who have high need for cognition often need logical reasons for buying any product. Thus, in such cases marketers should use central routes of persuasion i.e. consumer response can be initiated by offering information rich, rational and argument-based ads (Lin, 2011). On the other hand, in case of high affect intensity consumers, marketers should use peripheral routes of persuasion i.e. emotionally charged advertising appeals and peripheral cues such as creative aspects of ad, attractiveness and credibility of endorser etc. (Petty, Cacioppo and Schumann, 1983). Such strategy can be fruitful in case of FMCG. However, the findings of this study establish that in case of consumer durables, even high affect intensity consumers tend to prefer logical evaluations of a brand. Therefore, in case of durables, in addition to any emotional appeal used to persuade HPFA audience, ad appeals should also state

logical reasons why a brand should be consumed. For HNFC audience, strong rational and argument-based ads are expected to be most fruitful. In case where targeted audience may include both HNFC and HPFA individuals, the best strategy shall be to use ad appeals including both emotionally charged as well as logical arguments for buying a consumer durable brand, such as Davicom ad used in this study. The results have also depicted that the cognitive and affective processing may take place independently as well as interactively. It has been found that while LPFA individuals are typically HNFC and LNFC individuals are typically HPFA, it is recommended that any ad should use either use emotional appeal or logical appeal or a combination of both. Ads should not be weak in both such appeals.

This study attempts to provide insights for marketing and advertising practitioners to be able to strategize their advertising campaigns more effectively, by focusing on specific appeals that are better suited to their specific targeted audience. Also, it is established that all ad appeals are not equally attractive and targeted consumers get influenced by only some of them (Suri and Monroe, 2001). Differences in consumers' response to ad appeals are also obvious across FMCG and durables.

Limitations and Scope for Future Research

This study used a survey method to capture individual's cognitive and affective processing. As responding to survey questionnaire requires certain cognitive processing, the non-verbal nature of affect coupled with research on hemisphere lateralization suggests that it might be difficult to capture affective processes via cognitive methods (Obermiller and Spangenberg, 1996). Also, the use of reverse-coded items in the scale envisaged more cognitive processing to accurately interpret the questions. Since the ads were self-developed and were not actual ads by any company, source credibility may also have influenced the effectiveness of the ads to some extent (Zhang and Buda, 1999).

Similar studies in future need to include passive processors and understand which type of ad appeal may be effective on them. Also, additional research is needed to examine situational effects on individuals' processing styles and the interaction of affective and cognitive processing styles in specific decision making or choice situations. For example, in a family situation, one spouse may take a cognitive approach to purchasing a product while the other spouse utilizes an affective process; as a consequence, two different processes are used to arrive at a particular decision (Sojka and Giese, 1997). In this study, typically unknown brands were used for creating the ads. Future research can test the mediating effect of brand equity on information processing and brand preference.

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Annexure

The advertisements used in this research

Bubbles Citrus Rockstar Davicom Morph Orange